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System and Method for Knowledgeable Node Initiated TCP Splicing

ABSTRACT

A system and method utilizes back-end nodes to determine which node should handle an incoming requests and then utilizes the front-end switch to splice one or more connections between the client and the chosen node. Chosen nodes can repeatedly handoff the connection to other nodes to handle the client's requests. The front-end switch provides the initial client connection to back-end nodes in round-robin approach distributing initial connections among the back-end nodes. A proxy application on the backend node accepts the connection, parses the request, and determines which back-end node should handle the request. If another back-end node should handle the request, the back-end node currently connected to the client performs a handoff to the target back-end node. The switch splices the initial connection to a connection to the selected node and modifies subsequent packet headers appropriately in order to map the two connection states to one another.